UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application)
since a specific reference was included in the first sentence of the specification or in an Application Data Sheet.
37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific
reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-39 are rejected under 35 U.S.C. 102(e) as being anticipated by

WALKER (US 6,138,171).

As to claims 1 and 10, WALKER teaches a computer-implemented method

comprising: receiving a plurality of events (message) (col. 9, lines 25-42; col. 10, lines

52-54); applying the plurality of events to a correlation function (FsmInstances), wherein

the correlation function is implemented as a state machine (via FsmMap or FsmArray)

(col. 9, lines 25-57; col. 7, lines 38-41); and generating a specific event (event) if the

correlation function is satisfied by the plurality of events (via communication between

state machines) (col. 7, lines 47-62).

As to claim 2, WALKER teaches the correlation function is a class object

(FsmInstance) (col. 11, line 52 – col. 12, line 13).

As to claim 3, WALKER teaches the steps of: receiving a data element (state identifier / symbolic message identifier); and applying the data element (state identifier / symbolic message identifier) and at least one of the plurality of events (message object) to the correlation function (col. 9, line 47 - col. 10, line 33).

As to claim 4, WALKER teaches the steps of: receiving a plurality of data elements (state identifier / symbolic message identifier) (via a plurality of message objects); and applying the plurality of data elements (state identifiers / symbolic message identifiers in / due to a plurality of message objects) and the plurality of events (message objects) to the correlation function (FsmInstance) (col. 9, line 47 - col. 10, line 33).

As to claim 5, WALKER teaches communicating the specific event (event) to at least one event consumer (state object / another state machine) that subscribed to the specific event (via processEvent member function being called) (col. 11, line 52 - col. 12, line 13; col. 7, lines 42-62).

As to claim 6, WALKER teaches continuing to receive additional events (message objects) and apply the additional events (message objects) to the correlation function (FsmInstance) if the correlation function is not satisfied by the plurality of events (col. 10, lines 52-54; col. 9, lines 25-42).

As to claim 7, WALKER teaches resetting the correlation function (FsmInstance) after generating a specific event (via setStateID member function) (col. 12, lines 4-11).

As to claim 8, WALKER teaches the steps of: creating an instance of a particular state machine (via factory creating FsmInstance); and defining transitions (states) for the particular state machine by subscribing to at least one event (via FsmMap or FsmArray) (col. 11, line 52 – col. 12, line 13; col. 9, lines 25-57).

As to claim 9, WALKER teaches applying an update consumer to the particular state machine to update the state of the particular state machine (via the programmer modifying the initialization files) (col. 6, lines 5-27; col. 7, lines 4-11; col. 8, line 8 – col. 9, line 9).

As to claims 11 and 19, WALKER teaches a computer-implemented method comprising: receiving a plurality of events (messages) (col. 9, lines 25-42; col. 10, lines 52-54); receiving a plurality of data elements (state identifier / symbolic message identifier of messages); identifying a plurality of correlation functions (FsmInstances); applying the plurality of events (message objects) and the plurality of data elements (state identifier / symbolic message identifier of messages) to the plurality of correlation functions (state identifiers / symbolic message identifiers in / due to a plurality of message objects to the plurality of FsmInstances) (via FsmMap or FsmArray) (col. 9, lines 25-57; col. 7, lines 38-41); and generating a specific event if at least one of the

plurality of correlation functions is satisfied (via communication between state machines or with state machine) (col. 7, lines 47-62; col. 9, lines 25-42).

As to claim 12 and 13, WALKER teaches each of the plurality of correlation functions is implemented as a state machine as an instance of a class object (FsmInstance) (col. 11, line 52 – col. 12, line 13).

As to claim 14, WALKER teaches communicating the specific event (event) to at least one event consumer (state object / another state machine) that subscribed to the specific event (via processEvent member function being called) (col. 11, line 52 - col. 12, line 13; col. 7, lines 42-62).

As to claim 15, WALKER teaches continuing to receive additional events (message objects) and additional data elements (state identifier / symbolic message identifier of messages) and applying the plurality of events with the additional events (message objects), the plurality of data elements with the additional data elements (state identifier / symbolic message identifier of messages) to the correlation functions (FsmInstances) (col. 10, lines 52-54; col. 9, lines 25-42).

As to claim 16, refer to claim 15 for rejection. However, claim 16 further details receiving additional correlation functions and applying the events and data elements to the additional correlation functions. WALKER teaches creating a plurality of correlation

functions (FsmInstances) and applying events (message objects) and data elements (state identifier / symbolic message identifier of messages) to the additional correlation functions (FsmInstances) (col. 11, line 52 – col. 12, line 13).

As to claim 17, WALKER teaches generating the specific event (event) if at least one of the plurality of correlation functions or at least one of the additional correlation functions (FsmInstances) is satisfied (via communication between state machines) (col. 7, lines 47-62).

As to claim 20 and 27, WALKER teaches a computer-implemented method comprising: identifying a schema for creating state machines (FsmInstances) (via the configuration file) (col. 7, line 63 – col. 9, line 3), the state machines (FsmInstances) to correlate at least two events (events the FsmInstances may respond to); creating an instance of a particular state machine (FsmInstances) (via the configuration file) (col. 7, line 63 – col. 9, line 3); defining transitions (state objects) for the particular state machine by subscribing to at least one event (fig. 3); and applying an update consumer to the particular state machine to update the state of the particular state machine (via the programmer modifying the initialization files) (col. 6, lines 5-27; col. 7, lines 4-11; col. 8, line 8 – col. 9, line 9).

As to claims 21 and 22, WALKER teaches the particular state machine includes a timer, and deleting the particular state machine if the timer expires (col. 12, lines 14-36; col. 12, lines 41-65).

As to claims 23 and 24, WALKER teaches the particular state machine (FsmInstance) correlates at least one event (message object) and at least one data element (state object) (col. 9, line 47 - col. 10, line 33).

As to claim 25, WALKER teaches determining a current state of the particular state machine (via current state identifier) (col. 9, lines 38-40).

As to claim 26, WALKER teaches the particular state machine (FsmInstance) is an instance of a class object (col. 11, line 52 – col. 12, line 13).

As to claim 28, WALKER teaches an apparatus comprising: a plurality of event consumers (state objects / another state machine / FsmInstances); and an event correlator (FsmInstance to state objects / FsmMap to FsmInstances / FsmArray to FsmInstances) coupled to the plurality of event consumers, the event correlator to receive events (message objects) from at least one event source and to receive data elements (state identifier / symbolic message identifier of messages) from at least one data source, the event correlator further to receive at least one correlation function (capability of translating message and mapping it the FsmInstance assigned

responsibility for processing the message) and to apply the received events (message

objects) and the received data elements (state identifier / symbolic message identifier of

messages) to the correlation function (FsmInstance) wherein the event correlator

generates a specific event (event to be propagated to further dependent state

machines) if the received events and the received data satisfy the correlation function

(col. 9, lines 25-42; col. 10, lines 52-54; col. 7, lines 38-62; col. 11, line 52 - col. 12, line

13).

As to claim 29, WALKER teaches the event correlator (FsmMap / FsmArray /

FsmInstance) communicates the specific event to the plurality of event consumers

(delegated FsmInstances / another FsmInstance) (col. 9, lines 25-57; col. 7, lines 47-

62).

As to claim 30, WALKER teaches the event correlator (FsmMap / FsmArray /

FsmInstance) communicates the specific event (event) to event consumers (delegated

FsmInstances) that have requested to receive the specific event (col. 9, lines 25-57; col.

7, lines 47-62).

As to claim 31, WALKER teaches the event correlator (FsmMap / FsmArray)

communicates the specific event to a plurality of filters (processEvent function of

FsmInstances), wherein each of the plurality of filters is associated with one of the

plurality of event consumers (FsmInstances) (col. 12, lines 1-8).

As to claims 32 and 33, WALKER teaches the event correlator (FsmMap / FsmArray / FsmInstance) includes at least one state machine to implement the correlation function (via delegating to a specific FsmInstance to process event) (col. 7, lines 26-41; col. 7, lines 47 – col. 8, line 7; col. 9, lines 25-42).

As to claim 34, WALKER teaches the event correlator (FsmMap / FsmArray / FsmInstance) continues to receive additional events (message objects) and additional data elements (state identifier / symbolic message identifier of messages) and apply the additional events and the additional data elements to the correlation function (FsmInstances) (col. 10, lines 52-54; col. 9, lines 25-42).

As to claims 35-37, reference is made to a computer readable medium that corresponds to the method of claims 11-13 and is therefore met by the rejection of claims 11-13 above.

As to claim 38, WALKER teaches causing the processor to identify a current state of the state machine (via current state identifier) (col. 9, lines 38-40).

As to claim 39, WALKER teaches the steps of: creating a new instance of a state machine to implement a particular correlation function (FsmInstance) (via configuration file); and defining transitions (states) for the new instance of the state
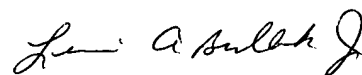
machine by subscribing to at least one event (State defines the behavior of Fsminstance in terms of the events that FsmInstance may respond to while in the current state...)(col. 7, line 63- col. 9, line 3).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0286.

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